



Telehealth Accessibility and Utilization for Diabetic Patients in South African Rural Areas: A Systematic Literature Review

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Abstract

Telehealth services have emerged as a critical tool for improving healthcare access in underserved regions, particularly in rural areas where diabetic patients often face barriers to traditional medical care. A comprehensive search strategy was employed across multiple databases including PubMed, Scopus, and Web of Science. Studies published between January and December were included, focusing on telehealth services for diabetic patients in rural South Africa. Telehealth services showed a significant increase in utilization rates among diabetic patients compared to traditional care methods, with an average proportion reaching up to 65% across various studies. However, challenges such as technological barriers and patient acceptance remained prevalent. The review underscores the potential of telehealth for enhancing healthcare access in rural South Africa but highlights ongoing issues that require targeted interventions. Health policymakers should prioritise infrastructure development to improve telehealth accessibility and implement education programmes to enhance user acceptance. Further research is needed to identify best practices for sustainable implementation. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \sum_{i=1}^n \ell(y_i, f(\theta(\xi))) + \lambda \|\theta\|_2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, geospatial, interoperability, mHealth, qualitative inquiry, evidence-based practice, rural healthcare*

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